

**REMARKS**

Claims 1 and 3-16 are all the claims pending in the application. Claim 1 has been amended to include the subject matter of claim 2. New claim 16 is added and support is found at least on page 16, lines 8-13 and Figs. 4A and 4B. No new matter has been added.

**I. Claim Rejections - 35 U.S.C. § 102**

The Examiner rejected claims 1-5 and 7 under 35 U.S.C. 102(b) as allegedly being anticipated by Yasukawa et al. (US 6,139,132). Applicant respectfully traverses.

In rejecting the claims, the Examiner has alleged that Yasukawa discloses “a metallic reinforcement member (Fig. 24, element 107), integrally molded with the casing such that at least a part thereof is buried in the casing at the vicinity of the first face (column 13, lines 60-67; column 14, lines 1-3).” (Office Action, page 3.) Claim 1 requires:

a metallic reinforcement member, integrally molded with the casing such that at least a part thereof is buried in the casing at the vicinity of the first face, wherein the reinforcement member extends in the casing so as to surround the actuator chamber.

First, Yasukawa fails to teach or suggest that the reinforcement member extends in the casing so as to surround the actuator chamber, as recited in claim 1. Fig. 24 of Yasukawa does not show that the fixing substrate 107 (*alleged metallic reinforcement member*) extends in the casing to surround the actuator chamber. Further, the Examiner noted that claim 22, of Yasukawa, teaches the above-identified feature (Office Action, page 3). The passage of claim 22 applied by the Examiner reads as follows: “a fixing substrate (107) to which said piezoelectric vibrating elements are fixed at a predetermined pitch in at least one array”. However, attaching vibrating elements to a fixing substrate in an array does not read on a reinforcement member

extending in the case to surround the actuator chamber, as recited in claim 1. That is, claim 22 does not teach or suggest that the vibrating elements are surrounded by the fixing substrate.

Second, Yasukawa also shows that the fixing substrate (*alleged metallic reinforcement member*) 107 is a part of the vibrator unit 110, where the piezoelectric vibrator elements 11 are attached to the fixing substrate 107 via rear end plate 111. (Fig. 24) Thus, the fixing substrate 107, in Yasukawa, is similar to the “fixation plate” in the actuation unit in claim 1. However, the fixing substrate 107 (*alleged metallic reinforcement member*), in Yasukawa, does not read on the metallic reinforcement member, as recited in claim 1. The fixing substrate 107 is neither integrally molded with, nor buried in the casing. Indeed, the fixing substrate 107 is a separate and distinct element from the metallic reinforcement member in claim 1, given the fact that the fixing substrate 107 is formed as a member of the vibrator unit 10.

Therefore, Yasukawa fails to teach or suggest a metallic reinforcement member, integrally molded with the casing such that at least a part thereof is buried in the casing at the vicinity of the first face, as recited in claim 1.

For at least the foregoing reasons, Yasukawa does not anticipate the subject matter of claim 1. Therefore, the § 102 rejection of independent claim 1, along with its dependent claims 2-7, should be withdrawn.

### **III. Claim Rejections - 35 U.S.C. § 103**

The Examiner rejected claims 1-5 and 7 under 35 U.S.C. 103(a) as allegedly being unpatentable over Wanibe (JP 2001-113697) in view of Ohta et al. (US 5,818,482). Applicant respectfully traverses.

In this rejection, the Examiner has alleged that the back up plate 1, in Wanibe, reads on the metallic reinforcement member in claim 1. The back up plate 1, however, does not extend in the casing so as to surround the actuator chamber 12, in Wanibe. As clearly seen in the drawings of Wanibe, neither the back up plate 1 nor 301 surrounds the actuator chamber, as recited in claim 1.

Ohta, applied by the Examiner for it teaching regarding a metallic cavity unit, does not compensate for the deficiencies of Wanibe. Even taken for what they would have meant as a whole to a skilled artisan, Wanibe and Ohta do not render the subject matter of claim 1 unpatentable.

For at least the foregoing reasons, the subject matter of claim 1 is patentable over the combined teachings of Wanibe and Ohta. Therefore, the § 103 rejection of independent claim 1, along with its dependent claims 2-7, should be withdrawn.

#### **IV. Allowable Subject Matter**

Claim 6 is objected to as being dependent upon a rejected base claim. Applicant has so rewritten claim 6 in independent form. Accordingly, the objection should be withdrawn.

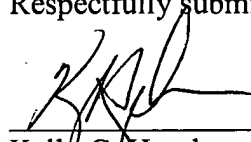
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

**Amendment Under 37 C.F.R. §1.111**  
**U.S. APPLICATION NO. 10/612,875**

**ATTORNEY DOCKET NO. Q76460**

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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